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WHAT IS CLAIMED IS:

 An image processing apparatus comprising: image pickup means for producing image data by photographing an image;

first storage means for storing image data obtained by said image pickup means;

size reduction means for reducing the size of the image data stored in said first storage means after reading out the image data;

second storage means for storing, in a unit corresponding to a predetermined number of lines, the size-reduced image data obtained by said size reduction means; and

single compression means for alternately performing, according to a predetermined switching timing, first compression processing to read out the image data stored in said first storage means and to compress the image data without reducing the size, and second compression processing to compress the size-reduced image data stored in said second storage means to obtain two kinds of compressed data representing one photographed image.

An apparatus according to Claim 1, wherein
 said size reduction means includes means for converting
 the format of the image data.

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- 3. An apparatus according to Claim 1, further comprising third storage means for enabling the two kinds of compressed data corresponding to one photographed image and obtained by said first compression processing and said second compression processing to be managed by being related to each other.
- 4. An apparatus according to Claim 1, wherein said compression means comprises JPEG coding.
- 5. An image processing apparatus comprising: first storage means for storing input image data; size reduction means for reducing the size of the image data stored in said first storage means after reading out the image data;

second storage means for storing, in a unit corresponding to a predetermined number of lines, the size-reduced image data obtained by said size reduction means; and

single compression means for alternately
performing, according to a predetermined switching
timing, first compression processing to read out the
image data stored in the first storage means and to
compress the image data without reducing the size, and
second compression processing to compress the sizereduced image data stored in the second storage means

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to obtain two kinds of compressed data representing one photographed image.